uniden®

PRO510XL/PRO510AXL
Professional
Mobile CB radio

INTRODUCTION

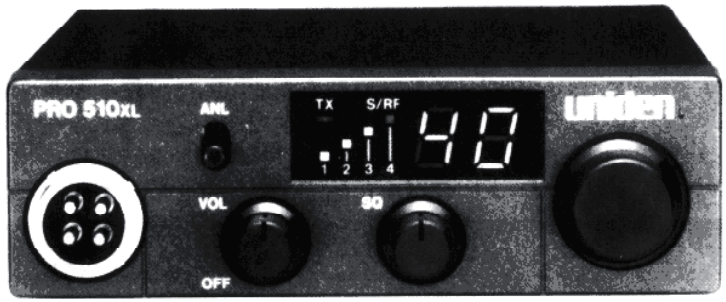
Welcome to the world of sophisticated, state-of-the-art CB radio communications. Your Uniden PRO510XL/PRO510AXL represents the most advanced mobile radio ever designed for use in the Citizens Band Radio Service. It will operate on any of the 40 AM frequencies authorized by the Australian Communications Authority (A.C.A.). Your PRO510XL/PRO510AXL features a superheterodyne circuit with PHASE LOCKED LOOP techniques to assure precise frequency control.

Note: *PRO510AXL includes PRO510XL radio, antenna and cigarette lead is one package.*

CONTROLS AND FUNCTIONS

1. **ANL Switch** - You can select the Automatic Noise Limiter to help reduce harsh background noise caused by a variety of interference sources.
2. **TX LED** - An LED lights to indicate when the radio is transmitting.
3. ***Microphone*** - The operational mode of the CB is controlled by the push-to-talk switch on the mic. Press the switch to activate the transmitter and disable the receiver. Release the switch to enable the receiver and disable the transmitter. When transmitting, hold the mic about 2 inches from your mouth and speak clearly in a normal voice. The mic included with the PRO 510XL/PRO510AXL is a detachable electret type.
4. ***S/RF Meter*** - This LED meter shows the relative strength of the received signal or the RF output.
5. ***Channel Indicator*** - Displays the channel currently in use.
6. ***Channel Selector*** - This switch selects the desired channel for transmission and reception. All channels, except channel 9, may be used for communications between stations operating under different license. Channel 9 has been reserved by the *A.C.A.* for emergency communications involving the immediate safety of individuals or the immediate protection of property. Channel 9 also may be used to render assistance to a motorist. This is an *A.C.A.* rule and applies to all operators of CB radio.
7. **Squelch** - The Squelch control is used to eliminate background noise during the absence of a transmission. Turn the control fully counter clockwise, then slowly rotate it back, clockwise until all noise disappears. At this setting any transmission must be slightly stronger than the background noise to "Break Squelch" or to be heard. Further clockwise rotation will increase the threshold at which a signal will be heard. You can select any level to "Break Squelch"
8. **Volume Control** - Rotate clockwise to turn radio on and to increase volume.

Antenna Connector - This female connector permits connection of the transmission line cable male connector (PL-259) to the transceiver.



OPERATION

Operating Procedure to Receive

1. Be sure that the power source, antenna and microphone are properly connected.
2. Turn the unit on by rotating the volume control clockwise.
3. Set the channel selector switch to the desired channel.
4. Set the volume control to a comfortable listening level.
5. Listen to the background noise from the speaker. Turn the squelch control clockwise until the noise disappears (no signal should be present). Leave the control at this setting. The squelch is now properly set. The receiver will remain quiet until a signal is actually received. Do not advance the control too far, or some weaker signals will not be heard.

Operating Procedure to Transmit

1. Be sure the operator has read and understands A.C.A. rules and regurations prior to operating the transmitter.
2. Select the desired channel for transmission.
3. If the channel is clear, depress the push-to-talk switch on the side of the microphone and speak in a normal voice.

CAUTION: The transceiver Voltage Standing Wave Ratio (V.S.W.R.) measurement must be performed prior to the use of the transmitter. A "V.S.W.R." ratio in excess of 2:1 may damage the transmitter. Please check your SWR reading frequently by using an SWR meter.

Preventative Maintenance

At six to twelve month intervals, the following system checks should be made:

1. Check the Voltage Standing Wave Ratio (V.S.W.R.)
2. Inspect all electrical connections.
3. Inspect antenna coaxial cable for wear.
4. Inspect all screws and other mounting hardware.

SPECIFICATIONS

Channels:	40 AM
Frequency Range:	26.965 to 27.405 MHz
Frequency Control:	Phase Locked Loop (PLL) synthesizer
Frequency Tolerance:	±0.005%
Operating Temp.:	−10°C to +50°C
Microphone:	Plug in type: Electret
Input Voltage:	13.8 VDC nom. (+ or − ground)
Current Drain:	TX: full mod., 1.7A RX: with max audio output, 1.7A
Size:	4 ½" W × 6 ¾" D × 1 ⅜" H
Weight:	1 lb. 9 oz.
Antenna Connector:	UHF, SO-239
LED Meter:	Indicates relative RF output and received signal strength

TRANSMITTER

Power Output:	Maximum Legal Output Power
Modulation:	Class B *(Amplitude Modulation)*
Freq. Response:	300 - 2500 Hz
Output Impedance:	50 ohms, unbalanced

RECEIVER

Sensitivity:	0.5 μV for 10dB; (S + N)/N typical (limit: 1.0 μV)
Selectivity:	6dB @ 7KHz, 70dB @ 10KHz typical
Image Rejection:	80 dB typical
I.F. Frequency:	Double Conversion Superheterodyne 1st 10.692 MHz 2nd 450 KHz
Automatic Gain Control:	(AGC): less than 10dB change in audio output for inputs from 10 to 50,000 microvolts
Squelch:	Adjustable; threshold less than 1 μV
Audio Output Power:	7 watts max. into 8 ohms
Freq. Response:	300 to 2000 Hz
Distortion:	less than 10% at 4 watts, 1000Hz
Internal Speaker:	16 ohms, 3 watts round
External Speaker:	(not supplied) 8 ohms

Specifications and features are subject to change without notice.

TROUBLE SHOOTING

If your PRO510XL/PRO510AXL is not performing up to your expectations, please try the following troubleshooting steps after reading this manual.

If you determine that service is necessary, contact your local dealer or pack the unit in its original carton and send it along with a brief, concise description of the problem, your name, address, phone number, and a copy of the original purchase receipt to the address listed in the warranty.

TROUBLE	CHECK
Unit will not turn on. No power	1. Check power cord and all connections. 2. Check power cord fuse. 3. Check vehicle electrical system.
Poor reception	1. Check and adjust Squelch. 2. Check antenna system, cable, and connectors. 3. Check operation mode of the radio.
Weak transmission	1. Check antenna system, cable, and connectors. 2. Check antenna grounding. 3. Check for corrosion on connectors.

Servicing Your CB

Technical information, diagrams and charts will be provided upon request. It is the user's responsibility to see that this radio is operating at all times in accordance with the *A.C.A.* Citizens Radio Service regulations. We highly recommend that you consult a qualified radiotelephone technician for service and alignment of this radio. When ordering parts, it is important to specify the correct model number and serial number of this radio.

INSTALLATION

Plan the location of the radio and microphone bracket before starting installation. Select a location that is convenient for operation and does not interfere with the driver or passenger in the vehicle. The radio should be securely fastened to a solid surface using the mounting bracket and self-tapping screws which are provided.

Mobile Antenna

Since the maximum allowable power output of the transceiver is limited by the *A.C.A.*, the antenna is a very important factor affecting transmission distance. It is for this reason that we strongly recommend that you install only a quality antenna in your new CB radio system. You have purchased a superior quality transceiver. Don't diminish its performance by installing an inferior antenna.

Only a properly matched antenna system will allow maximum power transfer from the 50-ohm transmission line to the radiating element. We recommend that you use an SWR meter when installing your antenna. Set your PRO510 XL/PRO510AXL to channel 20 and make adjustments to the antenna until the meter reads as close to 1 as possible. Your Uniden dealer is qualified to assist you in the selection of the proper antenna to meet your application requirements.

For automobile installation, the whip antenna may be used with good effect. The most efficient and practical installation is a full quarter wave whip antenna mounted on the rear deck or fender top, midway between the rear window and bumper.

A short "loaded" whip antenna is more convenient to install on your automobile, although the efficiency is less than a full quarter wave whip antenna.

For marine installation, consult your dealer for information regarding an adequate grounding system and prevention of electrolysis between fittings on the hull and water.

Connecting the Power Cord

With regard to the connection of the power cords, it may be possible or desirable to connect the red lead (for negative ground systems) or the black lead (for positive ground systems) to the ignition switch accessory terminal so that the radio is automatically turned off when the ignition switch (key) is turned off.

Alternately, the power lead may be connected to an available terminal on the fuse block or even to a point in the wiring harness. Care must be taken, however, to guard against a short circuit condition. When in doubt, please contact your vehicle dealer for specific information about your vehicle.

Ground Information

Most newer cars and small trucks use a negative ground system, while some older cars and some newer larger trucks may use a positive ground system. A negative ground system is generally identified by the "—" battery terminal being connected to the vehicle motor block, but if you cannot determine the polarity of your vehicle, consult your vehicle dealer for information.

NOTE: This radio may be installed and used in any 12-volt DC negative or positive ground system.

Negative Ground System

If you are operating on a negative ground system, connect the red DC power cord from the radio to the positive " + " battery terminal or other convenient point and connect the black power lead to the chassis or vehicle frame, or the negative " — " terminal of the battery.

Positive Ground System

If you are operating on a positive ground system, connect the black DC power cord from the radio to the negative " — " battery terminal or other convenient point and connect the red power lead to the chassis or vehicle frame, or the positive " + " terminal of the battery.

WARRANTY

PRO510XL/PRO510AXL
Australian 1 Year Warranty

Note: Please keep your sales docket as it provides evidence of warranty.

WARRANTOR: Uniden Australia PTY Limited ACN 001 865 498

ELEMENTS OF WARRANTY: Uniden warrants to the original retail owner for the duration of this warranty, its PRO510XL/PRO510AXL Radio (hereinafter referred to as the product). To be free from defects in materials and craftsmanship with only the limitations or exclusions set out below.

WARRANTY DURATION: This warranty to the original retail owner only, shall terminate and be of no further effect ONE (1) Year after the date of original retail sale. This warranty will be deemed invalid if the product is; (A) Damaged or not maintained as reasonable and necessary, (B) Modified, altered or used as part of any conversion kits, subassemblies, or any configurations not sold by Uniden. (C) Improperly installed. (D) Repaired by someone other than an authorized Uniden Repair Agent for a defect or malfunction covered by this warranty. (E) Used in conjunction with any equipment or parts or as part of a system not manufactured by Uniden. (F) Installed, programmed or serviced by anyone other than an authorized Uniden Repair Agent. (G) Where the Serial Number label of the product has been removed or damaged beyond recognition.

PARTS COVERED: This warranty covers for 1 year the PRO510XL/PRO510AXL Radio Unit only. All accessories are covered for 90 days.

STATEMENT OF REMEDY: In the event that the product does not conform to this warranty at any time while this warranty is in effect, the warrantor at its discretion, will repair the product and return it to you without charge for parts and service.
THIS WARRANTY DOES NOT COVER OR PROVIDE FOR THE REIMBURSEMENT OR PAYMENT OF INCIDENTAL OR CONSEQUENTIAL DAMAGES.

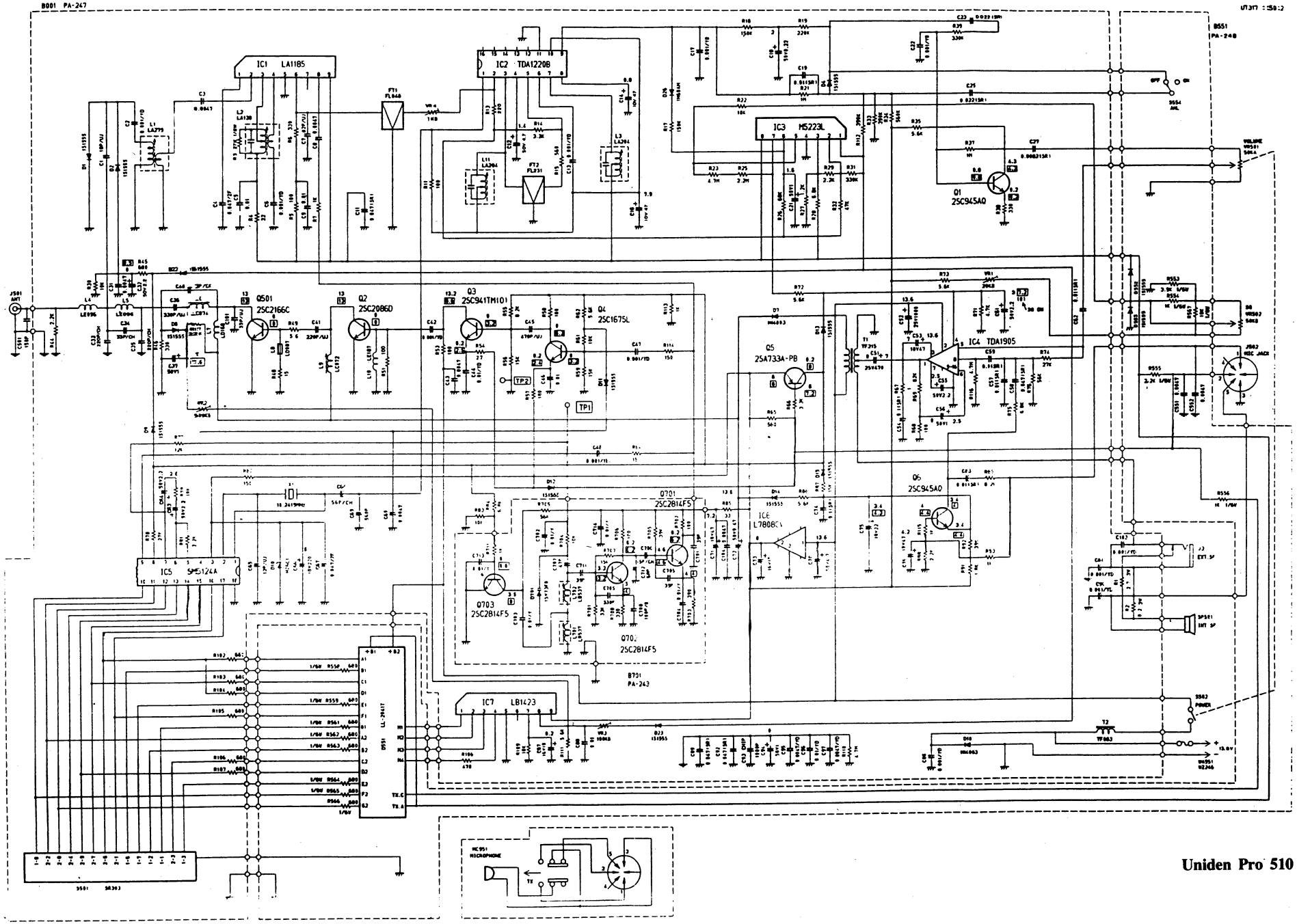
WARRANTY CARD: If a warranty card has been included with this product then please fill it in and return it to us within 14 days of purchase. Your name and serial number of the product will then be registered in our database and this will help us process your claim with greater speed and efficiency should you require warranty service.

PROCEDURE FOR OBTAINING PERFORMANCE OF WARRANTY: In the event that the Product does not conform to this warranty, the Product should be shipped or delivered, freight pre-paid, with evidence of original putchase, (eg/ a copy of the sales docket), to the warrantor at:

UNIDEN AUSTRALIA PTY. LIMITED
SERVICE DIVISION
345 Princes Highway, Rockdale, NSW 2216
Ph (02) 9599 3577 FAX (02) 9599 3278

Customers in other States should ship or deliver the Product freight pre-paid to their nearest Uniden Authorized Repair Centre. (Contact Uniden for the nearest Warranty Agent to you)

UTUA01340AA © Copyright 1999 Uniden Corporation Printed in the Philippines


IC1 LA1185
IC2 TDA1220B
IC3 M5223L
IC4 TDA1905
IC5 SM5124A
IC6 L7808CV
IC7 LB1423
Q1 2SC945AQ
Q2 2SC2086D
Q3 2SC941TM101
Q4 2SC1675L
Q5 2SA733A-PB
Q6 2SC945AQ
Q501 2SC2166C
Q701 2SC2814F5
Q703 2SC2814F5
Q702 2SC2814F5
B701 PA-243
B551 PA-248
MIC JACK
SP501 INT SP
SW2 POWER
MC951 MICROPHONE